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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,514	09/25/2001	Aaron R. Kunze	10559-526001	3324

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EXAMINER	
HYUN, SOON D	

ART UNIT	PAPER NUMBER
2416	

NOTIFICATION DATE	DELIVERY MODE
12/19/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No.	Applicant(s)	
	09/965,514	KUNZE ET AL.	
	Examiner	Art Unit	
	SOON-DONG D. HYUN	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-11,13-15,17-21,23-27 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4-11, 13-15, 17-21, 23-27, and 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title

2. Claim(s) 8-11, 13-15, and 17 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing (Reference the May 15, 2008 memorandum issued by Deputy Commissioner for Patent Examining Policy, John J. Love, titled "Clarification of 'Processes' under 35 U.S.C. 101"). The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 5-9, 11, 13-15, 17-21, 23, 25-27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindgren et al (U.S. Patent No. 6,980,545).

Regarding claims 1, 8, 13, 14, and 23, Lindgren et al (Lindgren) discloses a method and apparatus (FIG. 4) for routing data packets, comprising:

a network interface (14, a network medium access unit) to receive data packets;

a processor (a data packet processor 22) coupled with the network interface;

a memory (not shown, but inherently required for the processor) coupled with the processor to instruct the processor to load a routing data structure (a cache routing table 34) to store information indicating that the received data packet is to be dropped (discarded), if a match is found i.e., if the received data packet includes predetermined non-forwarding destination addresses comprising a destination address that is invalid for packets traveling between networks (col. 6, lines 22-45).

However, Lindgren et al (Lindgren) does not explicitly teach that the routing table comprises a deprecated directed broadcast address.

It would have been obvious to one having ordinary skill in the art to enter any kind of destination addresses into the routing table (the cache routing table 34 in FIG. 4) for the processor to find matching entries in the cache routing table corresponding to the destination addresses of packets and to discard the packets.

Regarding claims 2 and 9, Lindgren further discloses that the routing data structure comprises a routing table (col. 6, lines 26-31).

Regarding claim 5-7, 11, 15, and 25-27, Lindgren further discloses that the stored information comprises a portion of address field (col. 6, lines 32-35) and a format for the destination address (a network identifier) is defined by Internet Protocol (col. 4, lines 50-57).

Regarding claim 17, Sawada doe not teach that dropped packets are counted.

It would have been obvious to one having ordinary skill in the art to count the dropped packets for further management of the network, since the number of dropped packets could be a kind of statistics for system reliability and management.

Regarding claim 18, refer to the discussion for claim 1. Lindgren does not explicitly teach that that a received packet is transmitted to a second network only if a match of the destination address in the cache routing table is not found. Lindgren further teaches that a routing processor (26 in FIG. 4) is processing routing of the received packet if a match of the destination address in the cache routing table is not found (col. 5, lines 53-67 and col. 6, lines 22-45). Therefore, it would have been obvious to one having ordinary skill in the art to transmit the received packet to a second network only if

a match of the destination address in the cache routing table is not found and the routing processor has determined (col. 5, lines 63-67).

Regarding claim 19, refer to the discussion for claims 2 and 18.

Regarding claim 20, Lindgren does not explicitly teach that the processor checks the destination address four bit at a time.

It would have been obvious to one having ordinary skill in the art to check the destination address four bits at a time if no unexpected results can be seen from the use of four bits at a time.

Regarding claim 21, refer to the discussion for claims 11 and 20.

Regarding claim 29, refer to the discussion for claims 26 and 28.

6. Claims 4, 10 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindgren et al (U.S. Patent No. 6,980,545) in view of Sawada et al (US 2002/0016858).

Regarding claims 4 and 10, refer to the discussion for claims 1 and 8.

However, Lindgren et al (Lindgren) does not explicitly teach whether the routing table has a one bit of discard flag for a packet having the invalid destination address.

Sawada et al (Sawada) teaches a routing table having a discard flag and an associated flag (pointer) for a packet with a destination address to be dropped. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a one-bit discard flag into the routing table of Lindgren et al to drop the packets.

Lindgren and Sawada still does not teach a pointer to the flag.

It would have been obvious to one having ordinary skill in the art to incorporate a pointer for the table entry to speed a searching procedure associated with entries in the table.

Regarding claim 24, refer to the discussion for claims 10 and 23. Lindgren does not teach that the information comprise a pointer to a route entry to indicate a next-hop address. It would have been obvious to one having ordinary skill in the art to incorporate a pointer for a next-hop address into a routing table to search the entries in the table faster.

Response to Arguments

7. Applicant's arguments filed 9/23/2008 have been fully considered but they are not persuasive.

Regarding claims 1, 8, 13, and 18, Applicant argues (the Remarks page 9, lines 21-30) that the routing table of Lindgren does not serve to filter packets, because Lindgren's router, upon receipt of a packet comprising the inserted depreciated directed broadcast address would forward the packet and not drop the packet. Examiner disagrees.

With reference to col. 6, lines 22-4 and discussion in the claim rejection above, the cache routing table 34 stores predetermined non-forwarding destination addresses and the packets are dropped if a mach is found.

Therefore, Examiner believes that the claim rejection is proper.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SOON-DONG D. HYUN whose telephone number is (571)272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000

/Soon D Hyun/
Examiner, Art Unit 2416

/Chi H Pham/
Supervisory Patent Examiner, Art Unit 2416
12/16/08